

Claims

- [c1] A method for facilitating transactions, comprising the steps of:
- receiving from a merchant, desiring to receive authorization for a transaction, a token and information identifying an account with a card issuer;
 - decrypting the token using a symmetric cryptographic key converted from an account number associated with the account with the card issuer; and
 - verifying information retrieved from the token and approving the transaction if the transaction satisfies any restrictions retrieved from the token.
- [c2] The invention of claim 1 wherein the token has a length that is identical to the account number.
- [c3] The invention of claim 2 wherein the card is a credit card and wherein the account number is a credit card number.
- [c4] The invention of claim 2 wherein the card is a calling card and wherein the account number is a calling card number.
- [c5] The invention of claim 3 or 4 wherein the symmetric cryptographic key is converted from an account number using a cryptographic hash function.
- [c6] The invention of claim 3 wherein the restrictions retrieved from the token are selected from the group consisting of restrictions on a monetary limit, restrictions on number of uses, monetary restrictions, restrictions on category of product, restrictions on recipients, and restrictions on validity period of the token.
- [c7] The invention of claim 4 wherein the restrictions retrieved from the token are selected from the group consisting of restrictions on calling number, restrictions on time of call, restrictions on duration of call, and restrictions on number of calls.
- [c8] A method for facilitating transactions, comprising the steps of:
- receiving an account number and a set of transaction restrictions from a user having an account with a card issuer;
 - converting the account number into a symmetric cryptographic key; and
 - encrypting information encoding the restrictions using the symmetric

cryptographic key to obtain a token which may be utilized in a transaction and verified by a card issuer using the account number.

- [c9] The invention of claim 8 wherein the token has a length that is identical to the account number.
- [c10] The invention of claim 9 wherein the card is a credit card and wherein the account number is a credit card number.
- [c11] The invention of claim 9 wherein the card is a calling card and wherein the account number is a calling card number.
- [c12] The invention of claim 10 or 11 wherein the symmetric cryptographic key is converted from an account number using a cryptographic hash function.
- [c13] The invention of claim 10 wherein the restrictions encoded in information in the token are selected from the group consisting of restrictions on a monetary limit, restrictions on number of uses, monetary restrictions, restrictions on category of product, restrictions on recipients, and restrictions on validity period of the token.
- [c14] The invention of claim 11 wherein the restrictions encoded in information in the token are selected from the group consisting of restrictions on calling number, restrictions on time of call, restrictions on duration of call, and restrictions on number of calls.
- [c15] A processor readable medium containing executable program instructions for performing a method on a device, comprising the steps of:
- receiving an account number and a set of transaction restrictions from a user having an account with a card issuer;
 - converting the account number into a symmetric cryptographic key; and
 - encrypting information encoding the restrictions using the symmetric cryptographic key to obtain a token which may be utilized in a transaction and verified by a card issuer using the account number.
- [c16] The invention of claim 15 wherein the token has a length that is identical to the account number.

[c17] The invention of claim 16 wherein the card is a credit card and wherein the account number is a credit card number.

[c18] The invention of claim 16 wherein the card is a calling card and wherein the account number is a calling card number.

[c19] The invention of claim 17 or 18 wherein the symmetric cryptographic key is converted from an account number using a cryptographic hash function.

[c20] The invention of claim 17 wherein the restrictions encoded in information in the token are selected from the group consisting of restrictions on a monetary limit, restrictions on number of uses, monetary restrictions, restrictions on category of product, restrictions on recipients, and restrictions on validity period of the token.

[c21] The invention of claim 18 wherein the restrictions encoded in information in the token are selected from the group consisting of restrictions on calling number, restrictions on time of call, restrictions on duration of call, and restrictions on number of calls.